App. Ser. No.: 10/776,982
Atty. Docket No.: BCS03463

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/776,982
Confirm. No.:	4523
Inventor:	David P. Gurney et al.
Filing Date:	February 11, 2004
Title:	Method and Apparatus for Improved Burst Acquisition in a Digital Receiver
Examiner:	Tayong, Helene E.
Art Unit:	2609
Atty. Docket No.:	BCS03463

Mail Stop Appeal
Commissioner for Patents
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PRE-APPEAL CONFERENCE BRIEF

Please review the Final Rejection mailed on October 10, 2007. No amendments are being filed with this Brief. This Brief is being filed with a Notice of Appeal and required fee. The review requested is attached hereto and is not more than five (5) pages. A Petition for One (1) Month Extension is also being submitted herewith so this response may be filed on February 11, 2008 (February 10, 2008 being a Sunday).

In the Final Office Action mailed on October 10, 2007, the Examiner rejected

claims 1-5, 8-10, 16-21 and 27 under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent No. 5,289,476 to Johnson et al.; rejected claims 6 and 7 under 35 U.S.C. 103(a) as

being unpatentable over Johnson et al. in view of U.S. Patent No. 6,975,165 to Lopez

Villegas and U.S. Patent Publication No. 2002/0186786 to Seo and rejected claims 11,

13-15, 22 and 24-26 under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. in

view of U.S. Patent No. 5,822,384 to Thebault et al.

In rejecting claims 1 and 16, the Examiner asserts that Johnson et al. teaches

performing a sync word search that includes "both a lower order modulation detection

and correlation process, and a higher order modulation detection and correlation

process," (emphasis added) in column 8, lines 29-41. This is not true.

What Johnson et al. teach in column 8, lines 29-41 is searching for a fixed code in

the BPSK-encoded preamble of every packet. That code then instructs the receiver to

decode the remaining portion of the packet using either BPSK or QPSK. (Emphasis

added). Thus, Johnson et al. teach decoding a first portion of the packet using BPSK and

decoding a second portion of the packet using either BPSK or QPSK. Nowhere does

Johnson et al. describe processing the same portion of the packet using both BPSK and

QPSK.

Claims 1 and 16 recite performing a sync word search using two different orders

of modulation detection and correlation. Thus, the same data is processed using BOTH

different orders of modulation and correlation. This is an important distinction that the

Examiner appears to gloss over. A receiver needs to know where the sync word is in

order to the timing of data demodulation to be correct. See present application, paragraph

[0023]. In order to be sure that the correct sync word is found, the claims of the present invention search the data twice using two different modulation schemes. Since Johnson et al. do not describe processing the same data using both a higher order of modulation detection and correlation and a lower order of modulation and correlation, it follows that Johnson et al. cannot anticipate claims 1 and 16.

In addition, Johnson et al. describe inserting the "fixed code" after carrier synchronization and bit synchronization. Thus the data in Johnson et al.'s packets that deal with synchronization are always modulated using BPSK. See Johnson et al.; column 3, lines 9-16. QPSK is never applied or used on Johnson et al.'s carrier synchronization or bit synchronization. In contrast, claims 1 and 16 perform a "sync word search" using both a lower order modulation detection and correlation process and a higher order modulation detection and correlation process. To the extent the Examiner is equating the claimed "sync" word with Johnson et al.'s carrier synchronization data and bit synchronization (preamble) data, Johnson et al. cannot anticipate claims 1 and 16 because Johnson et al.'s carrier synchronization data and bit synchronization data are ONLY modulated using BPSK. Two different orders of modulation detection and correlation are not performed on Johnson et al.'s carrier synchronization and bit synchronization data. The Examiner failed to address this argument in the Final Rejection mailed on October 10, 2007.

With respect to claims 4, 5 and 18, the Examiner asserts that the limitations therein are taught by Johnson et al. in column 10, lines 55-63. Applicant disagrees. The words "modify," or "supersedes," or their equivalents, are not used in Johnson et al.'s column 10, lines 55-63. As stated earlier, Johnson et al. uses either BPSK or QPSK on

certain portions of a packet. Nowhere do Johnson et al. use the results of QPSK demodulation to modify or supersede the results of BPSK demodulation, or vice versa. Since the BPSK and QPSK demodulation processes of Johnson et al. are independent of each other, it follows that Johnson et al. cannot anticipate claims 4 or 5.

In the Final Rejection mailed on October 10, 2007, the Examiner simply asserts that the words "modify" or "supersede" do not appear in independent claims 1 and 16. Applicant agrees, but points out dependent claims 4, 5 and 18 add these limitations and therefore properly further limit claims 4, 5 and 18 beyond claims 1 and 16. The Examiner is apparently ignoring the limitations recited in claims 4, 5 and 18 because they are in dependent claims. This is improper. See 35 U.S.C. 112, 4th paragraph; 37 C.F.R. 1.75 and MPEP 608.01(n).

With respect to claims 11 and 22, the Examiner asserts that Thebault et al. teach "signaling a valid burst detection" in column 4, lines 8-17. This is incorrect. Instead, Thebault et al. teach a process that achieves synchronization in line 17 of column 4. As stated in paragraph [0030] of the present application, burst detection and synchronization are two different things. Specifically, burst detection identifies likely QPSK signals while sync word acquisition is responsible for the burst/frame timing of the packet. Thus, burst detection and synchronization are two different things. Since Thebault et al. teach synchronization and not burst detection, it follows that the combination of Johnson et al. and Thebault et al. do not teach all of the limitations of amended claims 11 and 22.

The Examiner is apparently arguing that Thebault et al.'s synchronization is equivalent to the claimed burst detection because the Examiner may give any definition she wants to the claim term "valid burst detection." Applicant asserts that burst detection

and synchronization are two different things and one of ordinary skill in the art would

know the difference. Thus, the claims do define something different from Thebault et al.

in the fact they achieve a different result (bust detection vs. synchronization).

With respect to claims 15 and 26, Thebault et al. do not describe any process with

relation to an expected burst duration. Indeed, Thebault et al. do not even use the words

"burst" or "packet" anywhere in his patent. Thebault et al. do not teach the limitations of

claims 15 and 26. The Examiner has failed to address this argument raised in the

previous amendment. See Amendment filed July 18, 2007, page 12 and Final Rejection

mailed on October 10, 2007, page 6.

Applicant respectfully requests reconsideration of the present application,

withdrawal of the rejections made in the last Office Action and the issuance of a Notice

of Allowance. The Applicant's representative can be reached at the below telephone

number if the Examiner has any questions.

Respectfully submitted,

David P. Gurney et al.

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